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TITLE: FERROUS POWDER FOR SINTERED MAGNETIC MATERIAL

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ABSTRACT/PURPOSE: To provide ferrous powder for a sintered magnetic material having excellent magnetic characteristics by incorporating P- and O-contg. materials such as phosphorus oxide, iron phosphate and iron hydrogenphosphate at a specific ratio into iron powder.

CONSTITUTION: 1 or  $\geq 2$  kinds of phosphorus oxide such as phosphorus pentaoxide, iron phosphate such as ferrous phosphate or ferric phosphate or iron hydrogenphosphate such as ferrous hydrogen phosphate or ferric hydrogenphosphate are incorporated into the iron powder as the raw material for the sintered material for an iron core of an electric apparatus such as motor so as to be incorporated therein at  $0.02 \sim 2.5 \text{ wt\% P}$ ,  $0.10 \sim 2.0 \text{ wt\% O}$ . The iron powder contg.  $<0.1\% \text{ C}$ ,  $<0.2\% \text{ Si}$ ,  $<0.5\% \text{ Mn}$  and  $<0.02\% \text{ N}$  or further  $0.1 \sim 10\% \text{ Sn}$  is used. Such P- and O-contg. iron powder is molded and sintered, by which the iron powder for the sintered ferrous material having the magnetic characteristics equiv. to the magnetic characteristics of the conventional electrical steel sheet and silicon steel sheet is obtd.

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